

2016

Autism Spectrum Disorder: How Does Transitional Planning from Preschool to Elementary School Benefit Educational and Social Success?

Shakeika K. Everett

University of Mississippi. Sally McDonnell Barksdale Honors College

Follow this and additional works at: https://egrove.olemiss.edu/hon_thesis



Part of the [Communication Sciences and Disorders Commons](#)

Recommended Citation

Everett, Shakeika K., "Autism Spectrum Disorder: How Does Transitional Planning from Preschool to Elementary School Benefit Educational and Social Success?" (2016). *Honors Theses*. 850.
https://egrove.olemiss.edu/hon_thesis/850

This Undergraduate Thesis is brought to you for free and open access by the Honors College (Sally McDonnell Barksdale Honors College) at eGrove. It has been accepted for inclusion in Honors Theses by an authorized administrator of eGrove. For more information, please contact egrove@olemiss.edu.

Running head: AUTISM SPECTRUM DISORDER: TRANSITIONAL PLANNING


Autism Spectrum Disorder: How Does Transitional Planning from Preschool to Elementary
School Benefit Educational and Social Success?

Shakeika Everett

The University of Mississippi

A thesis submitted to the faculty of The University of Mississippi in partial fulfillment of the
requirements of the Sally McDonnell Barksdale Honors College

Oxford
May 2016


Advisor: Dr. Lennette J. Ivy, CCC-SLP


Advisor: Dr. Susan Loxeall-Hague


Advisor: Dr. Mark Loftin

Table of Contents

Abstract	4
Literature Review	5
Sensory Sensitivity	6
Issues with Communication	7
Atypical Communication	8
Joint Attention	9
Social Cognition Challenges	10
Emotion Recognition and Theory of Mind	10
Executive Function	11
Transitioning Within and Between Environments	12
Intervention Strategies	15
Technology as a Useful Intervention	18
Limitations to Intervention	20
Statement of the Problem	21
Research Questions	22
Methods	23
Results	24
Limitations	29
Conclusions	29

Implications for Future Research	30
Appendix A: International Review Board Approval	33
Appendix B: Parental Approval	41
Appendix C: Oxford School District Approval	43
References	46

Abstract

Autism Spectrum Disorder (ASD) is a disorder that impacts millions of people worldwide on a daily basis. While most adults with autism have received, and continue to receive, the proper assistance in engaging in everyday life, children with autism face more challenges that impacts their engagement socially. Many intervention methods have been researched and implemented to assist in communication and social involvement for children with ASD. However, little research exists on helping young children with ASD effectively transition, both academically and socially, from one educational environment to another. This research will contain a case study of a six-year-old child enrolled in the Hearing Impaired Language and Literacy Preschool Laboratory (HILL) class in the Department of Communication Sciences and Disorders at the University of Mississippi. The child is in the process of transitioning from the HILL preschool class to a public, elementary school setting, so this research will assess the daily activities and routines of the child within the HILL class, focusing primarily on how an alternative and augmentative communication (AAC) device helps to minimize outbursts from the child; the methods used to help the child transition to an elementary school program, and the daily activities and routines of the child within the elementary education program.

Autism Spectrum Disorder: How Does Transitional Planning from Preschool to
Elementary School Benefit Educational and Social Success?

Autism Spectrum Disorder (ASD) is a developmental disability that has affected, and continues to affect, people all over the world. The American Psychiatric Association (APA) defines ASD as a “developmental disability characterized by significant impairments in social interaction and social communication and by unusual behaviors that are repetitive, stereotyped, and restricted in nature” (Prelock, 2015, p. 5). Recent data has shown that ASD prevalence has increased seventy-eight percent over the last six years, affecting one in every sixty-eight children in the United States (Brown & Elder, 2014, p. 219). According to Prelock (2015), The Centers for Disease Control (CDC) reports that males are more likely to be affected by autism than females, with 1 in 42 boys having ASD as compared to 1 in 189 girls (p. 5). Autistic patients often have difficulty processing and expressing themselves through language and lack the ability to socially interact with other individuals. Along with communication issues, ASD individuals struggle with mind processes such as theory of mind and executive functioning. Each ASD individual is unique and has qualities that differentiate him or her from his or her fellow autistic peers. When determining intervention methods and treatments for autistic individuals, attuning to the particular needs of each person is essential, for no one treatment method is universal and effective for all ASD patients.

According to the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), to qualify for an autism diagnosis, “an individual must demonstrate a social impairment in at least two of four behaviors (i.e. lack of the uses of nonverbal behaviors such as eye gaze, facial expressions, body postures, self-regulatory gestures;

failure to engage with peers; failure to share enjoyment through pointing, showing, or bringing objects of interest to another; and, lack of social or emotional reciprocity);” however, the DSM-5, the revised fifth edition of the DSM-IV, added a new area to the autistic criteria: sensory sensitivity. The DSM-5 also provides a framework of severity levels for children with autism, varying from 1 to 3. Level 3 autistic children exhibit extremely severe deficits in verbal and nonverbal communication skills and very limited initiations of social interaction; these individuals require the most support. Level 2 autistic individuals exhibit prominent deficits in verbal and nonverbal communication skills, though not as severe as Level 3 individuals; Level 2 individuals require substantial support. Level 1 autistic individuals require only minimal support; without these supports, impairment would be unnoticeable, for these individuals exhibit normal verbal and nonverbal communication skills. Their only noticeable impairment would be lack of maintaining the flow of conversation and decreased social interactions (Prelock, 2015, p. 7). When determining methods of intervention for individuals with autism, recognizing and clearly understanding the sensory, communication, and social challenges they face is critical.

Sensory Sensitivity

Sensory sensitivity is found in as many as eighty percent of autistic individuals and includes “an apparent indifference to pain/temperature, adverse response to specific sounds or textures, excessive smelling or touching of objects, and visual fascination with lights or movement” (Prelock, 2015, p.6). Children with autism may either be hypersensitive in certain areas or hypo-sensitive in others. While autistic children are often most sensitive to touch and smell, other environmental factors and stimuli may

cause a distraction: bright or flashing lights; noises such as a loud classroom or a ringing telephone, at any sound level; unfamiliar textures; highly aromatized smells, such as alcohol wipes or cleaning solutions; and gesturing or being touched by a therapist or other educational professional. Because of the differences in their brains, children with autism are unable to filter and prioritize sensory signals. They may be unable to block out background noises. They also have difficulty with auditory processing and often respond with visual communication methods. They may focus on people or objects using peripheral vision because focusing directly forward may provide extreme amounts of sensory information at one time. Sensory sensitivity may also increase the severity of behavior problems that interfere with effective communication. In fact, many repetitive behaviors found in autistic children may actually be a means of adaptation for the sensory indifferences experienced (Brown & Elder, 2014, p. 222). Sensory impairments overwhelm the systems of patients with ASD, making it difficult for them to focus on communication tasks.

Issues with Communication

A defining characteristic of autism is an impairment in communication, language, and social skills. Communication is the process of exchanging information between two or more people. Communication involves both expressive language, being able to effectively produce a grammatically correct message, and receptive language, which is being able to comprehend and understand language. According to Brown and Elder (2014), typically developing children advance through three phases of communication: intentional communication, which is the use of gestures and vocalizations to meet a need or want; symbolic communication, which is the use of early language to interact with

others, gain attention, and meet wants and needs; and linguistic communication, which is the most sophisticated phase of communication development and is the ability to engage in full discourse with other individuals (p. 219). Autistic children often lack in one or more of these phases.

Typically developing infants usually form relationships through eye gaze and observing facial expressions; infants with ASD prefer to look at objects rather than people, then fixating on parts rather than wholes and on one item rather than multiple items. Typically developing infants around six to seven months begin to communicate through babbling, crying, and other vocal utterances; infants with autism hardly vocalize and seem to be unaware of language. Ten to twelve month old infants generally begin to use gestures to initiate wants and needs; infants with ASD use gestures less often and in less meaningful forms of communication (Brown & Elder, 2014). While autistic infants show delays in verbal milestones of typically developing infants, they lack in reaching the non-verbal milestones involved in typical language and communication development as well.

Brown and Elder (2014) list three behaviors that aid in the development of normal communication and language skills: participation in motor imitation, joint attention, and symbolic play. Motor imitation involves children imitating actions they see other people performing. Typically developing children understand the meanings of certain symbols and behaviors and can accurately imitate a motor behavior; children with ASD, on the other hand, fail to understand symbolic meaning and intentions and often show delays in imitating motor behavior.

Atypical Communication.

According to Brown and Elder (2014), twenty to fifty percent of people with ASD never develop functional communication. However, those who do display atypical styles of communications, such as echolalia, contact gestures, pronoun reversals, and neologisms. Children who display echolalia have a tendency to repeat words or phrases they have either heard immediately or heard in the past. Children engaging in contact gestures use other people in obtaining their wants and needs; for example, when wanting to watch a different television channels, a child with autism will grab an adult's hand and drag him or her to the television, indicating that they want the channel to be changed. Children who use first and second pronouns incorrectly display pronoun reversal; a child with ASD will state, "You want to go to the park," when having a desire to go to the park. Through the use of neologisms, children will assign meaning to a word or phrase that is not the socially accepted meaning of the word; for examples, while watching a movie about a dog named Rebel, a child is given popcorn. The next time the child wants popcorn, he or she will declare "Rebel" instead of "popcorn" (Brown & Elder, 2014, p. 220). Atypical styles of communication often develop due to a lack of understanding meaning for a child with autism. Theoretical perspectives on emotion recognition, theory of mind, and executive function seek to explain these styles by assessing and understanding how the ASD brain functions.

Joint Attention.

Wong and Kasari (2012) define joint attention as "the ability to shift attention between another person and an object or event," which contributes to communication in the fact that joint attention skills are used primarily for sharing interest or attention with other people (p. 2152). Joint attention is the ability to see and understand the interests of

others and express an interest by engaging in certain activities and behaviors. Typical development of joint attention involves the sharing of information and emotions, contributing to effective communication between peers. Children with ASD fail to emotionally relate to their peers and often show deficits in initiating, responding to, and engaging in joint attention. Rather than sharing interest, they opt to use pointing and other attention skills to show interest in the behavior of others. Children who have deficits in joint attention are often correlated with having issues in symbolic play as well.

Symbolic play is an essential predecessor of typical language development. Children build comprehension skills through understanding symbols and being able to progress from simply playing with toys to playing with toys symbolically. In typically developing children, pretend play is a natural phenomenon that gains complexity as they age. Children with ASD are less likely to engage in symbolic play; they play with toys in a rigid manner and neglect to initiate creative symbolic play activities. Autistic children often focus more on the physical aspects of an object, rather than engaging in creative play with the object (Wong & Kasari, 2012, p. 2152). Issues with symbolic play are often found in young, preschool children.

Social Cognition Challenges

Another prominent characteristic of ASD is a deficit in social interaction and social communication. Children with ASD have social challenges in attending to and responding to a communication partner. They suffer from issues with disengaging, orienting, and shifting attention. The ability to disengage allows typically developing individuals to respond to unexpected information or changes in conversation topics, while orienting allows communicators to localize and process information. Finally, the ability

to shift attention allows communicators to quickly process a new topic being discussed and to respond in the proper context in a timely manner (Prelock, 2015). Because individuals with ASD have issues with these three areas of social cognition, they are unable to not only maintain reciprocal communication, but they also exhibit deficits in two other primary components critical to social communication: emotion recognition/theory of mind and executive function.

Emotion Recognition and Theory of Mind.

Emotion recognition is the ability to understand facial expressions and affect, or how one's actions affect another individual. Individuals with autism are less likely to discuss mental and emotional states of other people. When developing narratives, they lack the ability to understand causal relationships between the thoughts and feelings, behaviors, actions, and events in the story; they attune very little to the listener's needs (Prelock, 2015, p. 8). Brown & Elder (2014) assert that this lack of empathy is associated with the lack of theory of mind, or mind blindness. Children with autism lack the ability to understand that other people think differently than they do; they are unable to comprehend that others have motivations behind their actions. Due to the lack of theory of mind, children with ASD have difficulty entering relationships; having the desire to maintain those relationships; and participating in natural language development activities, such as model imitation, joint attention, and symbolic play (p. 221). Many issues with pragmatic communication are explained through theory of mind.

Executive Function.

Executive function has been described by researchers as a “foundational skill that is necessary but not sufficient in the development or expression of social information

processing” (Prelock, 2015, p. 8). Executive function incorporates the mental processes needed to control actions by allowing a person to plan, organize, multi-task, make high-level decisions, to override or inhibit automatic behaviors or impulses, and to be flexible in thinking and learning. Impairment in executive functioning reveals difficulties in “organizing and sequencing, which require *dual focus*, the ability to know what has to be completed first (or next), while simultaneously understanding the relationship between steps and what the end result should look like,” along with difficulties in flexibility, planning, inhibition, self-monitoring, goal-setting, and working memory (Mavropoulou, Papadopoulou, & Kakana, 2010, p. 913). Prelock (2015) states that challenges in executive function impact critical thinking skills, causing children with ASD to have difficulty maintaining information important enough to draw conclusions, make inferences, and solve problems (p. 8). Flexibility is important in adapting to the increasing complexity of language; without executive function, adapting to different concepts is difficult, resulting in atypical forms of communication, primarily pronoun reversal (Brown & Elder, 2014, p. 221). When providing services to children with ASD to help them transition from one school setting to another more advanced grade level, understanding the concepts of emotion recognition, theory of mind, and executive function, as well as the effects the deficits in these areas have on children, is critical.

Transitioning Within and Between Educational Environments

Being taken from a small classroom that focuses only on their needs and being placed in an educational setting where they are mainstreamed with typically developing children can be extremely difficult for autistic children. The new environment itself can pose a distraction for the child, making transitioning both to a new style of education and

a new routine problematic. When an autistic child is separated from his or her normal routine, they often become frustrated and exhibit an outburst. An outburst occurs when autistic children realize that they are unable to clearly communicate with others.

Outbursts are signified by ignoring requests, refusing to cooperate, shouting or crying, and exhibiting inappropriate behavioral tendencies, such as biting (Brown & Elder, 2014, p. 223). To prevent such behavior, educating teachers on the proper techniques that help children with autism transition on a daily basis should be considered.

Hume, Sreckovic, Snyder, and Carnahan (2014) state that helping ASD students transition from one educational activity to the next requires four steps. Instructors must first identify when, where, and with whom the transitions occur. Autistic students may have problems transitioning between staff and classroom instruction, such as shifting between general and special education administrators and their differing instructional styles; between activities, subjects, and instructional formats, such as remaining in one classroom but switching topics or changing classrooms for different subjects; and between locations, such as moving from the classroom to the cafeteria for lunch time. These issues may be problematic of ASD students because these transitions require cognitive flexibility (the ability to switch thoughts and actions on demand), the ability to deal with overwhelming environmental stimuli, and the ability to process and understand sequenced verbal instructions, all of which autistic individuals struggle with. After identifying the problematic transitional areas, educators must then decide on the appropriate transition supports.

Step 2 of transitioning, according to Hume et. al (2014), requires assessing the various types of transition supports available and choosing the proper support. Visual

supports help decrease challenging behavior and latency, the amount of time taken to make a transition, while promoting independence. Priming and cueing are two supports that fall within the visual supports category. Priming supports allow students to view an activity or event before it occurs so that it is more predictable. Examples of priming supports are pictures; videos on televisions, computers and handheld devices such as iPads and iPods; and stories. In a study that included a seven-year-old ASD student named Adam revealed that video priming led to successful transitioning; after his teacher videotaped him transitioning from the classroom to the gymnasium and showing the video to him on an iTouch system before transitioning to the gym, Adam's outbursts decreased during future transitions. Similar to priming, cueing also allows an autistic child to transition more smoothly.

Cueing is used as a signal to indicate an upcoming transition. Cues can be given verbally or technologically, through the use of a mobile application called VoCal. VoCal allowed users to record a reminder in their own voice and set a time for the reminder to go off. With the use of this app, teachers can set a time and message for a student to make a transition, and a parent can set a reminder for home activities. However, verbal cues can be ineffective, due to an autistic child's lack of ability to effectively process verbal information; for this reason, cues may be visual and verbal—a child can be given a verbal command while being handed a visual support to aid in the command. Studies have also proven that the use of power cards, cards that include a command as well as a picture of a student's favorite character or topic, and visual schedules, schedules that sequentially display pictures or images that represent a student's schedule or a list of tasks that a student is expected to complete, are also effective cueing supports that improve

transitions (Hume et. al, 2014, p. 38-40). While visual supports have been proven to be beneficial in helping an autistic child transition between daily activity schedules, auditory transition supports exist for those individuals who benefit more from hearing instruction rather than visual instruction.

Auditory transition supports are also available for ASD students. Verbal advance warnings are the simplest forms of auditory transition supports. Auditory cues that signal the beginning and ending of activities or events help ASD students to prepare themselves to either begin or finish working and transition to a new event. High probability requests, another form of auditory support, include a series of directions involving tasks that the student have previously completed independently; a high probability request is a directive question that ASD students are likely to respond to appropriately. Low probability requests usually follow high probability requests and often involve requests to complete less appealing or more difficult tasks. Examples of high probability requests are, “Give me a high five,” or “Touch your nose.” Low probability request examples are, “Time to clean up” and “Start your work” (Hume et. al, 2014, p. 41). Auditory transition supports decrease transition time while increasing the independence of autistic individuals.

Steps 3 and 4 of the transitioning process involve implementing the proper supports and collecting data to problem solve for successful transitions. When implementing supports, team members must question themselves on how much information they have on the ASD student to ensure the proper support, how will the support be introduced to the student, and who and when will the support be introduced. The primary factors of step 3 are the age, needs, and learning characteristics of the ASD student. Younger students may prefer visible supports, while older students may prefer

less noticeable supports. After the supports are introduced, continually collecting data to determine the effectiveness of the support is essential. As the child progresses through school, team members must constantly assess the supports, deciding on whether the supports need to be adjusted to different transitioning challenges that can result from the length, the difficulty level, and the interest level of an activity (Hume et. al., 2014, pp. 42-44). When deciding on which type of support is most effective, team members must consider the student's interests and needs, staff's understanding and familiarity with such supports, and the available resources for the supports.

Intervention Strategies

Engagement is highly influential in positive language development for autistic individuals. The National Research Council (NRC) acknowledges engagement as a critical component of effective interventions and recommends twenty-five hours of engagement per week (Steinbrenner, 2015, p. 22). Children with ASD are often unengaged with their typically developing peers, often struggling to shift engagement between people and activities. Because engagement is a necessary aspect of academic, social, and language learning, interventions that focus on improving engagement between autistic individuals and their typically developing peers are highly suggested in aiding these individuals in transitioning to everyday life.

Steinbrenner (2015) states that instructional arrangement, types of instructional strategies, and adult interaction behaviors all have a positive impact on engagement levels of children with ASD. Small group and individual instruction has been correlated with higher rates of engagement for children with ASD, as compared to whole class and large group instruction. An experimental study determined that cooperative learning

groups, small groups of students all focused on a mutual goal, resulted in higher engagement than whole class instruction (p. 25). Speech-language pathologists can facilitate engagement and instructional arrangement in classrooms by setting up rotations with the classroom team and other staff. In this manner, SLPs can work with smaller groups of students who struggle in engagement in specific tasks, such as reading or vocabulary. SLPs can also rotate around the classroom during instruction to position themselves near students who require the most support for successful engagement. Encouraging and supporting teachers in using cooperative learning groups can also be a helpful task for engagement. SLPs can encourage activities such as reading and answering questions, assign specific roles to each student in the group, and ensure student participation in these activities by regulating student roles (p. 25-26). Not only is instructional arrangement important, but the types of strategies taught to ASD children also have an effect on engagement levels.

Three types of instructional strategies, according to Steinbrenner (2015), are effective in enhancing engagement levels of ASD children. A child is more likely to participate in an activity that piques his or her interest; for this reason, Steinbrenner (2015) suggests that offering choices of activities to autistic children has been shown to increase engagement for both play and academic tasks. By being able to choose from a variety of activities, children with ASD are able to select an activity of higher interest to them that may maintain their engagement in that activity (pg. 26). Along with offering choices to children with ASD, access to instructional material also aids in engagement levels.

Providing individual physical sets of instructional material or giving children periodic access to single sets of materials has also been proven to increase engagement levels of autistic children. Allowing students to use materials to engage in instructional activities and incorporating visual supports and structure in activities captures and maintains autistic children's interest in activities, ensuring their engagement in those activities (Steinbrenner, 2015, p. 26). A study described by Jung and Sainato (2013) incorporated activity schedules into the daily play of autistic individuals, in which the children were taught to put pictures of their selected play activities on a clipboard to forecast their selections; results indicated that the incorporation of activity schedules increased engagement with play materials, increased on-schedule behavior and play correspondence behavior, and helped to generalize on-task behavior (p. 84). The use of visual support allowed the children to facilitate independent engagement activities and transition smoothly from activity to activity.

Another effective instructional strategy for autistic children is the use of peer-mediated strategies. Peer-mediated intervention is most often used to improve social interaction of children with ASD. Jung and Sainato (2013) discuss a study involving three playgroups consisting of two autistic children and three typically developing children. In the study, the autistic children were encouraged to play with toys with their typically developing peers; results revealed that the autistic children engaged more in functional, symbolic, and social play and less in isolated play (p. 84). Steinbrenner (2015) suggests that encouraging the establishment of peer networks both in and outside of class (i.e. during recess or lunch) provides children with ASD with more regular support, increasing learning opportunities.

Finally, adult interaction behaviors should be considered when focusing on engagement of children with ASD. Addressing children directly and individually rather than addressing them in a group has been shown to increase engagement levels of autistic children (Steinbrenner, 2015, p. 27). SLPs can aid in engaging in effective adult interaction behaviors by focusing on individual students rather than addressing an entire group of children. Using a child's name at the beginning of a sentence, directing praise to each child's work individually, and asking open-ended questions rather than closed-ended can all aid in promoting engagement.

Technology as a Useful Intervention.

Technology can also be an effective intervention strategy for children with autism. Some children with ASD may have the aid of alternative and augmentative communication (AAC) or assistive technology (AT). The American Speech-Language-Hearing Association (ASHA) defines AAC as “an area of clinical practice that attempts to compensate (either temporarily or permanently) for the impairment and disability patterns of individuals with severe expressive communication disorders” and AT as “any commercial, hand-made, or customized device or service used to support or enhance the functional capabilities of individuals with disabilities” (Educating Children with Autism, p. 56-57.) AAC and AT devices help increase communication for individuals with disabilities through the use of visual language systems. For autistic children, using an AAC device can help increase verbal language and decrease loss of speech. Some may feel as if an AAC device will prevent an autistic child from having the desire to learn to communicate properly, but these devices have an adverse effect: they help children communicate and take away the frustration of not being able to communicate, eliminating

the possibility of an emotional outburst. AAC devices can be aided, meaning they require external equipment, or unaided, meaning the device can stand alone. Some examples of AAC devices include sign language, visual picture systems, digital voice outputs, computers, and even drawings and chalkboards (Brown & Elder, 2014, p. 222-223).

AAC and AT systems aid in communication primarily through visual supports. Various visual systems exist for autistic use. Picture Communications Symbols (PCS) are the most commonly used supports; through PCS, autistic children are able to increase communicative initiations and responses as well as increase their ability to engage in conversation without the prompts of an adult. The Picture Exchange Communication System (PECS) is another widely used visual symbol support system. PECS teaches autistic children to use symbols as a means of communication by teaching the child to initiate communicative requests by exchanging a symbol for a desired object. A case study of a group of preschoolers taught with PECS revealed that of sixty-six children using PECS for two years, thirty-nine (59%) developed independent speech, twenty developed speech through using PECS, and seven used only PECS. These results stated that by being able to use symbols to communicate, autistic children were able to develop speech (Educating Children with Autism, 2001, p. 58-59.)

A third AAC system used by children with autism is a voice output communication aid (VOCA). VOCA is a portable device that digitalized or recorded speech with a display screen, on which messages through symbols, words, or letters can be accessed. VOCA devices can range from a simple, single switch device with a limited number of voice messages to a more complex device that delivers a series of communicative units or messages and has the capability to provide thousands of

messages; more complex VOCA devices offers messages related to a specific theme or activity. Using VOCAs, autistic children are able to access verbal models for speech development, allowing children to facilitate more natural interactions. A study in which four autistic children with little to no functional speech were given VOCAs to aid in making requests revealed that all four children successfully learned to make requests, social comments, and respond to questions in a contextually appropriate manner (Educating Children with Autism, 2001, p. 59-60). Other visual systems exist for aiding autistic children in communicating: tangible objects; photographs; and symbol-to-word computer programs, such as Picture-it, Pix-writer, and Writing with Symbols 2000. Though the use of AAC and AT devices seem to be effective in helping children with ASD increase communication skills, limited research appears concerning assessing communication strategies from children with autism that use an AAC or AT method.

Limitations to Interventions.

Though extensive research can be found on autism spectrum disorder, limitations still exist. According to Prelock (2015), little literature exists on the implementation and success of current intervention practices. Limited time, training, and available resources exist for parents and educators who provide social, emotional, an educational support for autistic children. The needs of ASD children are most likely to be unmet, and parents of ASD children are less likely to be involved in intervention methods. Educators lack the training needed to design and manage a curriculum to meet the social cognitive needs, classroom needs, and educational benchmarks and testing scores needed to help autistic children transition to higher grade levels and more advanced learning styles. Interventions that engage both parents and educators by building on to their current

practices as well as their current knowledge fail to exist. Current intervention methods have failed to incorporate elements such as daily classroom activities and typical routines into their design, allowing a gap to exist between home strategies and school settings. Intervention practices that use assessment tools that allow educators and parents to identify strength areas and challenges in social cognition need to be implemented more, for they help tailor certain practices to a particular child's strengths and needs, allowing them to fully participate in their community.

Limited research exists regarding 1) autistic children transitioning from a preschool to an elementary school setting; 2) case studies investigating issues faced when transitioning between school settings; and 3) the impact of technology, such as iPads and AAC devices, on transitioning. Many autistic children, though not all, rely on some form of technological device to aid in communication. Whether it is an AAC device to express wants and desires or an iPad to calm them when they are upset, technology is a great asset to autistic children. More research needs to be done on the positive and negative aspects of technology, expressing its benefits or the harms on communication and transitioning to more advanced educational levels.

Statement of the Problem

Extensive research has been compiled on autism spectrum disorder (ASD). Numerous researchers have studied the disorder, describing its etiology and its effects. Various studies describe methods of intervention to help individuals with autism attempt to live normal lives within society. Much research can be found on the use of technological devices, such as alternative and augmentative communication (AAC)

devices, explaining how they assist individuals with autism in communicating properly. Some research exists on helping individuals with autism transition between various environments in their adult life. However, little research exists on preschoolers with autism and the issues they face in transitioning. The preschool period is a critical point in life. During this time period, the core of communication is beginning to form and be molded. Preschoolers with autism suffer from being unable to communicate properly. Though some research exists on preschoolers with autism collectively, little research focuses on a smaller subset of preschoolers with autism. Few case studies can be found describing a child with ASD and the issues he or she faces. One will not stay in the preschool stage his or her entire life. As one grows and develops, his or her mental, physical, and academic functions must grow and develop also. More research needs to be done on helping preschoolers effectively transition from a preschool setting to a more advanced, elementary education setting that offers intervention strategies that minimize frustrations and outbursts. Educators need to be more informed of these intervention techniques as well as how to manipulate them. Though children with autism have more deficits than typically developing children, they should not be deprived of a proper education. ASD is disorder, not a dysfunction. Educators and researchers should realize this and take the proper steps needed to establish a strong educational foundation for these individuals.

Research Questions

1. Does the four step transitioning technique minimize the inappropriate behaviors in children with autism when transition from one educational setting to another?

2. Does the use of a handheld technology devices such as an iPad mini, provide proper support to children with autism in transitioning between educational environments?
3. Do the instructional strategies of offering choices, providing access to sets of instructional materials, and incorporating an activity schedule enhance engagement levels in children with ASD?

Methods

Approval for this research project was obtained by the University of Mississippi's Institutional Review Board and the Oxford School District Board of Trustees. This research project is a case study to determine the effectiveness of transitioning strategies, intervention strategies and peer-mediation on successful educational engagement of a child with autism transitioning from an intensive preschool language program to being mainstreamed into an elementary school classroom. This study will assess the daily activities of an individual with autism in a preschool setting, that individual's transition from a preschool setting to an elementary education setting, and the daily activities of the individual within the elementary setting. The use of an alternative and augmentative communication (AAC) device, activity schedules, peer interaction, instructional arrangement, and other forms of classroom techniques that could possibly be a form of an intervention method and eliminates the probability of an outburst will be assessed.

Participants

The participant will be a six-year-old child diagnosed with autism enrolled in the Hearing Impaired Language and Literacy Preschool Laboratory (HILL) class in the Department of Communication Sciences and Disorders at the University of Mississippi. The child is also in the process of transitioning from the preschool environment of the HILL class to an elementary education setting.

Participation Criteria

The participant has to be a preschool child that has been formally diagnosed with autism spectrum disorder, has to be currently within a preschool setting, and currently transitioning or aspiring to transition from a preschool program to an elementary education program.

Results

The participant's graduate clinician evaluated the participant for two weeks at the beginning of the Fall 2015 semester and established baseline data. The participant began with a baseline of 0% for transitioning without outbursts from the HILL-T class to an elementary setting, 67% for transitioning between activities within each setting, and 38% for transitioning between various environments within each setting. Transitional strategies implemented in the HILL-T class included the use of giving choices, visual and auditory timers, sensory items, as well as visual activity schedules to aid in the participant's transitioning. The HILL-T classroom setting was designed so that each aspect of the Read It Once Again curriculum was separated into color coded sections referred to as "centers". Using a center schedule (i.e. a color-coded chart representing the centers), the participant was able to visually make the transition between activities at the prompting of his graduate clinician. A visual and auditory timer was located at each

station; he was able to see the time diminishing as well as hear an alarm from the clock when it was time to move to another station. The graduate clinician also used a necklace with laminated pictures of different environments, such as “home” and “school,” to aid him in transitioning between environments. A rubber chew tube was introduced to the participant later in the semester and was essential in calming him during overwhelming times, greatly reducing his outbursts when transitioning. Data from video observation and the graduate clinician’s reports, represented by Figures 1,2, and 3 below, revealed that the participant learned to effectively transition between activities and environments within the preschool setting with the aid of primarily auditory prompts; sensory prompts were also introduced to reduce outbursts during transitions and class time.

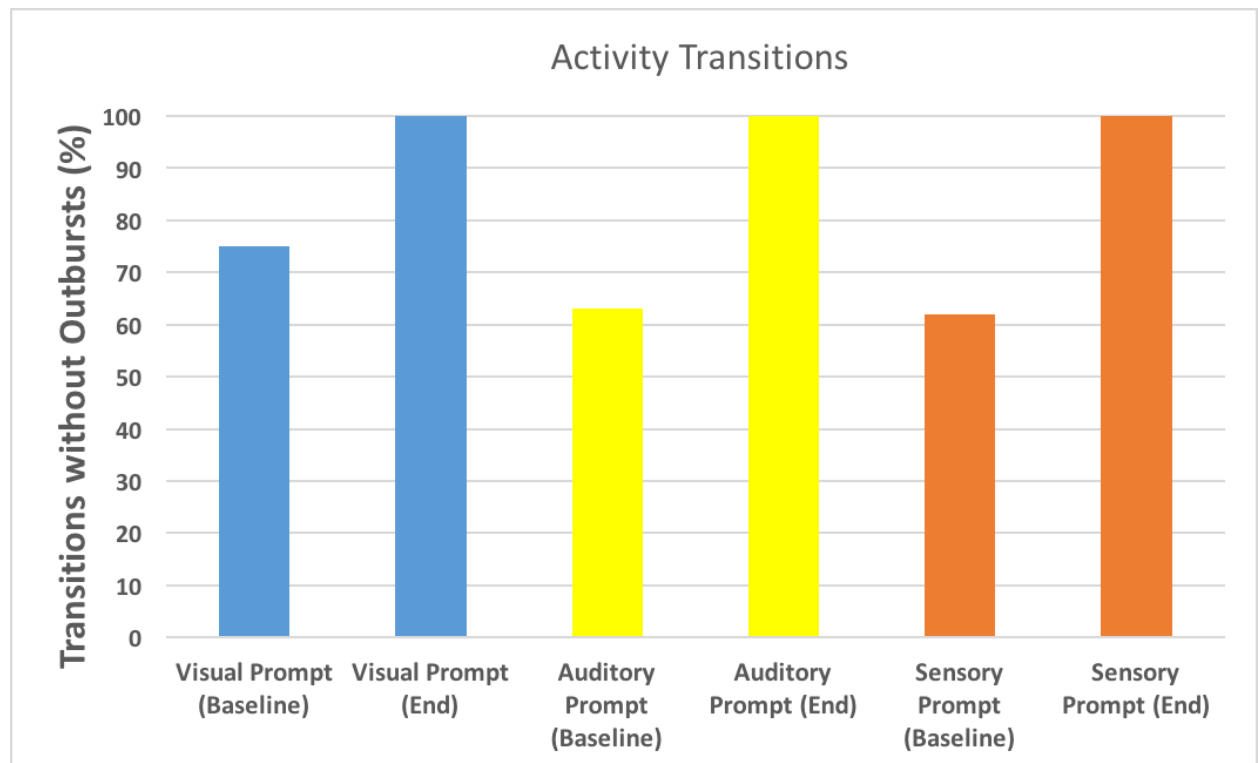


Figure 1. Activity transitions are defined as the participant transitioning between various centers and educational activities within the classroom.

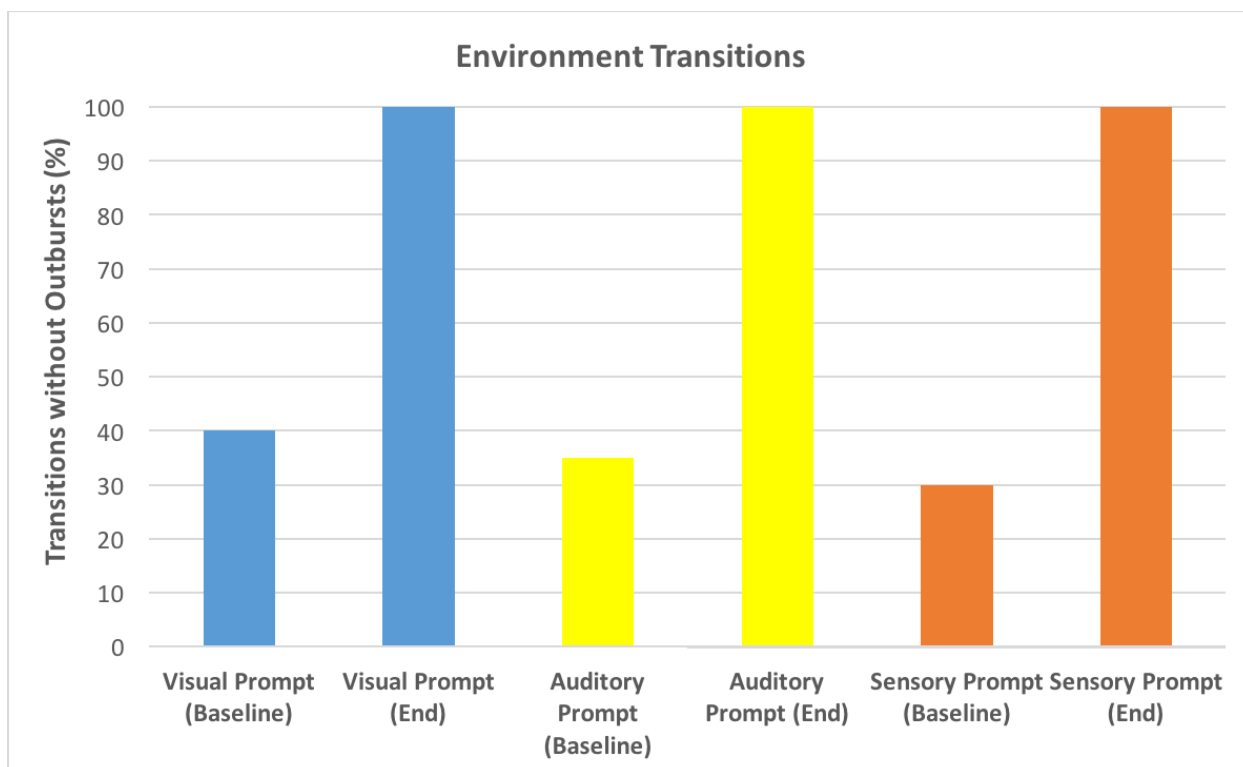
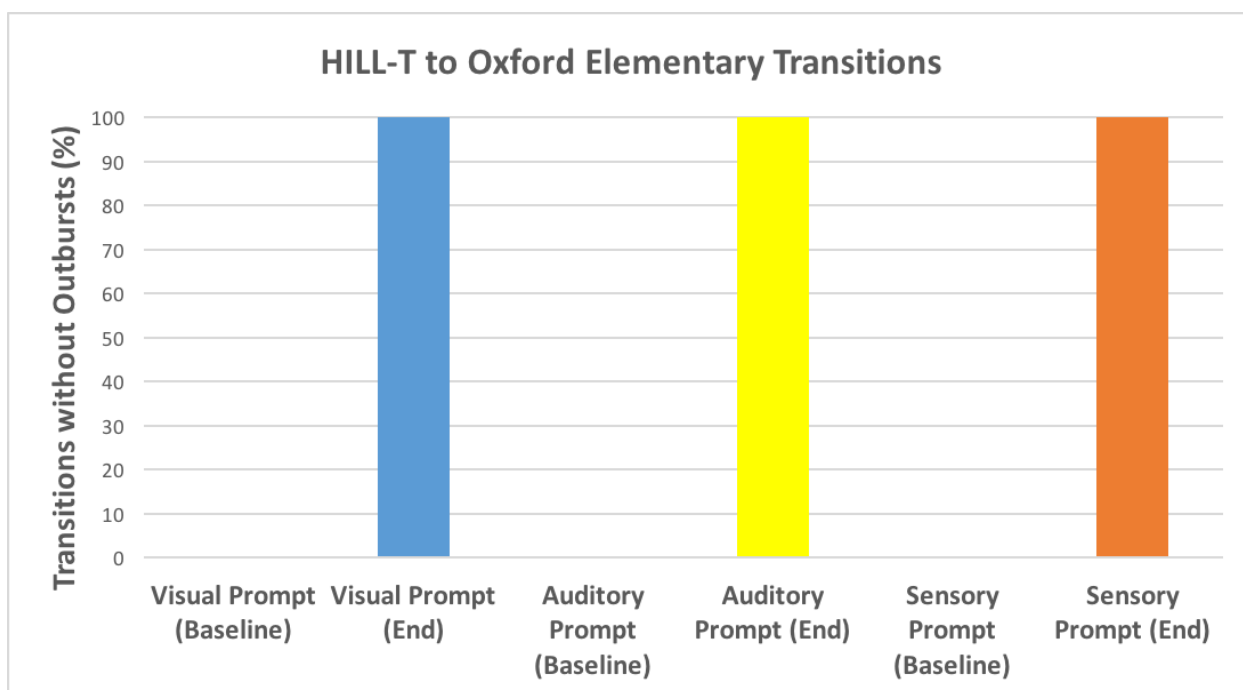


Figure 2. Environment transitions consisted of the participant transitioning between various service providers within the educational setting as well as between rooms within the educational setting (i.e. the therapy room, the restroom, the cafeteria, etc.).



Figures 1, 2, and 3. Through the use of primarily auditory and visual prompts, the participant learned to effectively transition between various activities within the classroom, between rooms and service providers within the school setting, and between a preschool setting and an elementary school setting (from the HILL-T class to Oxford Elementary School) with little to no outbursts.

In terms of communicating with his augmentative and alternative communication (AAC) device, the participant began with a baseline of 51% in communicating utterances. Data revealed that the participant had learned to communicate using two to four word utterances as well as wants and needs using his AAC device. The graduate clinician also used the strategy of offering choices to encourage the participant to use his AAC device more. Primarily during snack time and play time, the graduate clinician offered two choices of foods or toys to the participant and encouraged him to choose by using his device rather than pointing at the object. Figures 4 and 5 reveals the participant's progress in increasing his familiarity with his device. He learned best from modeling by his graduate clinician and from auditory prompts. In modeling, the graduate clinician first showed the participant how to manipulate his device to correctly respond to her request and then allowed him to respond again without her assistance. His spontaneous response rates decreased for both turn-taking and utterances; however, this was due to the fact that the client became more familiar with his device and learned to comprehend requests and navigate the device to give the most correct response. The graduate clinician worked closely with officials specialized in AAC devices to determine and incorporate words within the participant's lexicon onto his device.

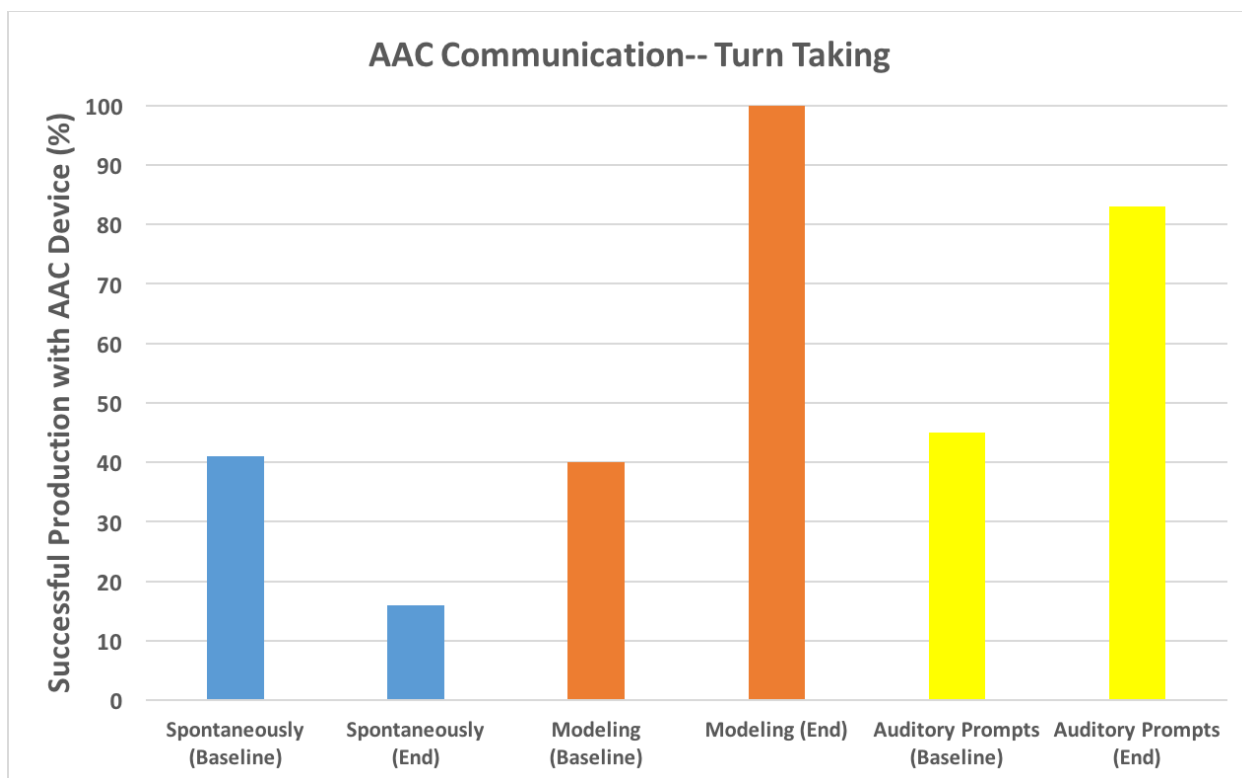
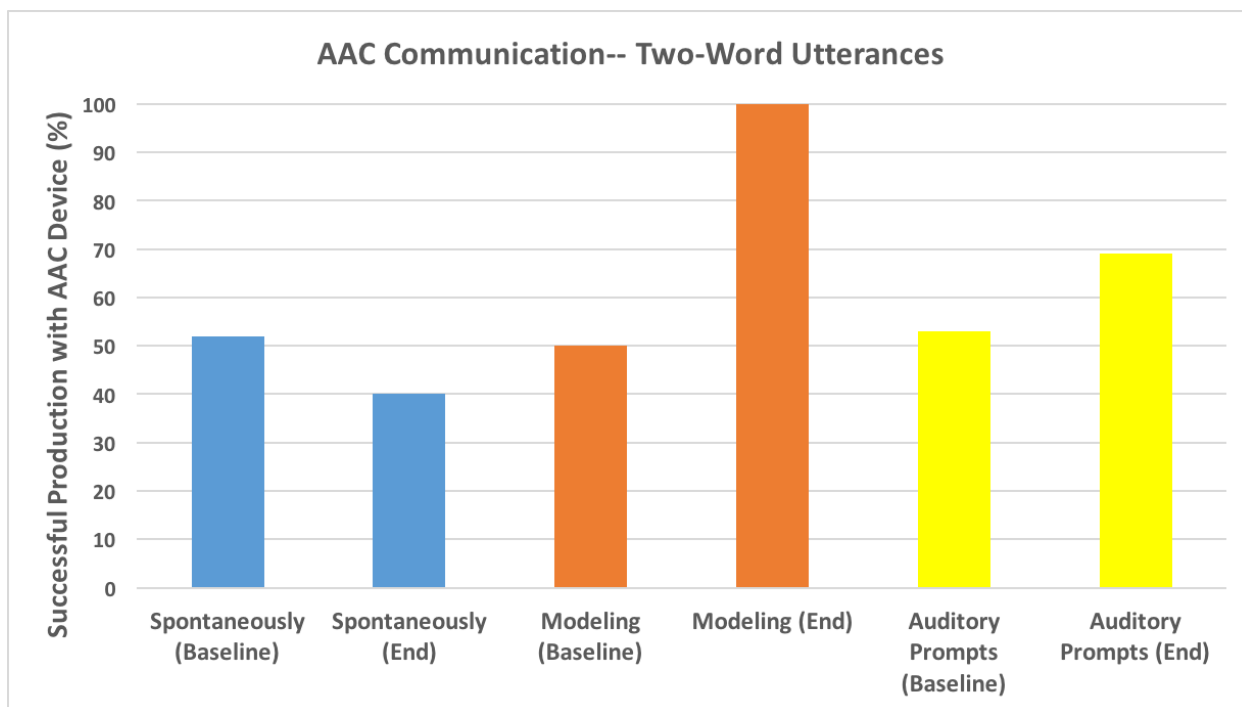


Figure 4. Data on the graph represent the participant's ability to request his turn spontaneously, after having his graduate clinician show him how to request his turn on his AAC device, and after hearing his graduate clinician verbally command him to request his turn.



Figures 4 and 5. The participant's technological progress was noted through his ability to request his turn and to produce multiple-utterance phrases. Modeling and verbal prompts from the participant's graduate clinician aided him most in increasing his familiarity with his AAC device to age level. Though the participant's spontaneous communication decreased, he learned to comprehend requests and instructions more clearly and how to respond accordingly.

Over the course of the research (one academic semester), the participant minimized outbursts when transitioning and learned to use his AAC device to communicate more. By December, the participant's teachers at Oxford Elementary School reported a tremendous reduction in outbursts when entering the class from the HILL-T class as well as when exiting his mother's vehicle at the beginning of the school day (i.e. the days that he did not attend the HILL-T class). The teachers also reported the effectiveness of implementing some of the strategies introduced by the graduate clinician in the classroom. Teacher reports also indicate that he learned to use his AAC device more in the elementary setting as well.

Limitations

One limitation of this study was conflicting schedules. The researcher's class schedules conflicted with the times the participant was both in the HILL-T class as well as when he went to Oxford Elementary. Data was obtained using recorded videos and reports from the graduate clinician and the participant's teachers at Oxford Elementary School. Few physical contact was made between the researcher and the participant to obtain data, limiting understanding and interpretation of the data received. Another limitation arose between participant's graduate clinician and his teachers at Oxford Elementary. The teachers expressed some hesitation during discussions about possibly

implementing some of the methods from the HILL-T class for the participant while he was in the elementary school setting. Due to the participant being a class among other children with special needs, the teachers seemed to be slightly overwhelmed at this research and the methods being introduced by the HILL-T class, claiming to have already been implementing those methods for the participant.

Conclusions

This research determined that the use of technological devices and the four-step transitioning process introduced by Hume et. al. (2014) are extremely effective in transitional planning. The case study confirmed that by determining when and where transitions occur and assessing the various types of supports available, children with autism spectrum disorder (ASD) can learn to effectively transition between various activities and environments with minimal outbursts. In this study, auditory and sensory supports were most beneficial to this child in communicating and transitioning. However, for other children with ASD, these types of supports may prove minimal in the transitioning process due to each child with ASD being unique and that the supports provided to the individual must be centered around his or her needs. Intervention methods must be individualized, for each child has varying strengths and weaknesses that must be considered and accommodated for.

Determining effective instructional strategies are also beneficial to transitional planning. This study revealed the strategy of offering choices and providing physical instructional material to the child, as well as developing activity schedules tailored to the child's routine tremendously increased social engagement and transitional awareness.

Educational service providers who are important to the learning experience of children with ASD, such as classroom teachers, occupational therapists, and speech-language pathologists, should constantly discuss the child's progress and collaborate to provide an effective transitional plan for the child.

Implications for Future Research

According to Denkyirah and Agbeke (2010), the United States of America deemed comprehensive federal government support for the education of children with ASD as a public responsibility as part of the Education Act of All Handicapped Children, now referred to as the Individuals with Disabilities Education Act (IDEA). However, there have been variations in how some states provide services to children with ASD, and though young children with ASD received more services than children with other disabilities, parents of children with ASD have reported to be dissatisfied with the services their children receive and have often requested schools to give more time and services to their children than did parents of children with other disabilities, revealing how critical it is for preservice programs for teachers of children with ASD and other disabilities to include skills for working with parents (p. 265-266). Research concluded that the effectiveness of a preschool transitional plan for children with autism depends wholly upon the strategies used, the time planning and preparation were initiated, support the parents receive in community resources, parent training and participation, the establishment of reciprocal information-sharing system between sending preschools and receiving kindergarten schools, and how much kindergarten teachers are prepared for the incoming child (p. 269). Teachers are as equally important as other service providers, and

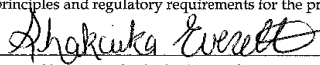
it is imperative that teachers know and understand how beneficial implementing transitional strategies for the child with ASD within the classroom can be.

Denkyirah and Agbeke (2010) state that teachers who are educated of their role can help parents who are willing to cooperate have an established understanding of their importance in the transitional plan. Early childhood special education teacher preparation programs must address parent-professional collaboration as a critical area in the curricula in order to help develop skills needed to work closely with parents. Preschool teachers should also initiate transition plans early and prepare both the child and his or her family at least six months before the child moves to kindergarten to prevent social, behavioral, and communication problems from worsening as the child moves from preschool to kindergarten. In addition, preschool teachers must share information with the child's family in the family's preferred language that details the steps of the transition process, their role, and the role of other individuals involved. Preschool teachers must also assist parents when visiting potential kindergarten programs and encourage them to explore opportunities and experiences of the staff by providing parents with information about registration, orientation, and other events from different kindergarten programs. It is also the preschool teachers' responsibility to provide additional community resources to the parent that will aid in helping the child and his or her family deal with major changes in service delivery as well as in their lifestyle. Finally, teachers in the sending preschool program and the receiving kindergarten program should communicate regularly about the incoming child's progress once the child is enrolled in the new program, for reciprocal follow up activities between the two programs are necessary, particularly, in the first few months of kindergarten life (pp. 268-269). Though this study only required teachers to

perform a minimal role of providing a verbal report, in general, teachers should work closely and actively with other service providers, collaborating to create and maintain a transitional plan for children with ASD and other disabilities.

Further research should be done to promote a better understanding of all service providers' role in a transitional plan for children with ASD, primarily teachers and parents. In turn, other service providers should consider and understand the pressure teachers are under when dealing with children of various learning abilities and backgrounds. With everyone understanding the role each individual plays in implementing a transitional plan for a child with autism, the child can learn to effectively transition not only within an educational setting but in other situations they encounter in life as well.

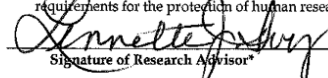
Appendix A

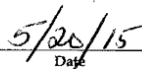
ASSURANCES ~ CONFLICT OF INTEREST AND FISCAL RESPONSIBILITY		
Do you or any person responsible for the design, conduct, or reporting of this study have an economic interest in, or act as an officer or a director of any outside entity whose financial interests may reasonably appear to be affected by this research?		
YES	→	If Yes, please explain any potential conflict of interest.
✓ NO		
Do you or any person responsible for this study have existing financial holdings or relationships with the sponsor of this study?		
YES	→	If Yes, please explain any potential conflict of interest.
✓ NO		
N/A		
SIGNATURES		
PRINCIPAL INVESTIGATOR AND RESEARCH ADVISOR (IF APPLICABLE) MUST SIGN BELOW		
<p>PRINCIPAL INVESTIGATOR'S ASSURANCE</p> <p>I certify that the information provided in the application is complete and correct. As Principal Investigator, I have the ultimate responsibility for the protection of the rights and welfare of the human participants, conduct of the research, and the ethical performance of the project. I will comply with all UM policies and procedures, as well as with all applicable federal, state, and local laws regarding the protection of participants in human research, including, but not limited to the following:</p> <ul style="list-style-type: none"> ▪ The research will be performed by qualified personnel according to the approved research protocol; ▪ No changes will be made in the research protocol or informed consent document(s) until approved by the IRB; ▪ Informed consent will be obtained from the participants, if applicable and appropriate; ▪ Adverse events and/or unanticipated problems will be reported to the IRB as required. <p>I certify that I, and all key personnel, have completed the required initial and/or refresher CITI courses in the ethical principles and regulatory requirements for the protection of human research participants.</p>		
		5/20/15
Signature of Principal Investigator		Date

RESEARCH ADVISOR'S ASSURANCE (REQUIRED FOR STUDENT PROJECTS)

As the research advisor, I certify that the student investigator is knowledgeable about the regulations and policies governing research with human participants and has sufficient training and experience to conduct this particular research in accordance with the approved protocol.

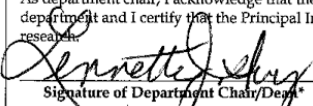
- I agree to meet with the investigator on a regular basis to monitor research progress;
- Should problems arise during the course of the research, I agree to be available, personally, to supervise the investigator in solving them;
- I will ensure that the investigator will promptly report adverse events and/or unanticipated problems to the IRB as required;
- If I will be unavailable, for example, on sabbatical leave or vacation, I will arrange for an alternate faculty member to assume responsibility during my absence and I will advise the IRB by letter or e-mail of such arrangements; and
- I have completed the required initial and/or refresher CITI courses in the ethical principles and regulatory requirements for the protection of human research participants.


Signature of Research Advisor*


Date

*The research advisor must be a UM faculty member. The faculty member is considered the responsible party for the ethical performance and regulatory compliance of the research project.

DEPARTMENT CHAIR MUST SIGN BELOW
<p>ABSTRACT: Briefly summarize your project using non-technical, jargon-free language that can be understood by non-scientists. Include: (1) a statement of the research question and related theory supporting the reasons for, and importance of, the research; (2) the ages and characteristics of your proposed subjects and how you will recruit them; (3) the research design; and (4) a description of the procedure(s) subjects will undergo. Limit to the space below. <u>For examples, click here to visit the ORSP website.</u></p>
<p>TYPE YOUR ABSTRACT HERE</p> <p>Autism Spectrum Disorder (ASD) is a disorder that impacts millions of people worldwide on a daily basis. While most adults with autism have received, and continue to receive, the proper assistance in engaging in everyday life, children with autism face more challenges that impacts their engagement socially. Many intervention methods have been researched and implemented to assist in communication and social involvement for children with ASD. However, little research exists on helping young children with ASD effectively transition, both academically and socially, from one educational environment to another. This research will contain a case study of a six-year-old child enrolled in the Hearing Impaired Language and Literacy Preschool Laboratory (HILL) class in the Department of Communication Sciences and Disorders at the University of Mississippi. The child is in the process of transitioning from the HILL preschool class to a public, elementary school setting, so this research will assess the daily activities and routines of the child within the HILL class, focusing primarily on how technological devices help to minimize outbursts from the child; the methods used to help the child transition to an elementary school program; and the daily activities and routines of the child within the elementary education program.</p>

DEPARTMENT CHAIR'S ASSURANCE	
As department chair, I acknowledge that the above described research is in keeping with the standards set by our department and I certify that the Principal Investigator has met all departmental requirements for approval of this research.	
 Signature of Department Chair/Dean*	5/20/15 Date
*If the Principal Investigator is also the department chair, this signature must be that of the Dean.	



9/2/2015

Ms. Everett
Communicative Sciences and Disorders
University, MS 38677

Dr. Ivy
Communicative Sciences and Disorders
University, MS 38677

IRB Protocol #: 15-060
Title of Study: Autism Spectrum Disorder: Is Technology Beneficial During the Transition from Preschool to Elementary School?
Approval Date: 09-02-2015
Expiration Date: 09-01-2016

Dear Ms. Everett:

This is to inform you that your application to conduct research with human participants has been reviewed by the Institutional Review Board (IRB) at The University of Mississippi and approved as **Expedited under 45 CFR 46.110, Category 7 with children CFR 46.404.**

Research investigators must protect the rights and welfare of human research participants and comply with all applicable provisions of The University of Mississippi's Federalwide Assurance 00008602. Your obligations, by law and by University policy, include:

- Research must be conducted exactly as specified in the protocol that was approved by the IRB.
- Changes to the protocol or its related consent document must be approved by the IRB prior to implementation except where necessary to eliminate apparent immediate hazards to participants.
- **Only the approved, stamped consent form may be used throughout the duration of this research unless otherwise approved by the IRB.**
- A copy of the IRB-approved informed consent document must be provided to each participant at the time of consent, unless the IRB has specifically waived this requirement.
- Adverse events and/or any other unanticipated problems involving risks to participants or others must be reported promptly to the IRB.
- Signed consent documents and other records related to the research must be retained in a secure location for at least three years after completion of the research.
- Submission and *approval* of the *Progress Report* must occur before continuing your study beyond the expiration date above.
- The IRB protocol number and the study title should be included in any electronic or written correspondence.

If you have any questions, please feel free to contact the IRB at (662) 915-7482 or irb@olemiss.edu.

Sincerely,

Ashley S. Crumby, PharmD
IRB Member

OFFICE OF RESEARCH AND SPONSORED PROGRAMS

100 Barr Hall | Post Office Box 1848 | University, MS 38677-1848 | (662) 915-7482 | Fax: (662) 915-7577 | www.olemiss.edu

COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI PROGRAM)
COURSEWORK REQUIREMENTS REPORT*

* NOTE: Scores on this Requirements Report reflect quiz completions at the time all requirements for the course were met. See list below for details. See separate Transcript Report for more recent quiz scores, including those on optional (supplemental) course elements.

- **Name:** Shakeika Everett (ID: 4694923)
- **Email:** skeveret@go.olemiss.edu
- **Institution Affiliation:** University of Mississippi - Oxford (ID: 542)
- **Institution Unit:** Communication Sciences and Disorders
- **Phone:** 6014102721

- **Curriculum Group:** Responsible Conduct of Research
- **Course Learner Group:** Social and Behavioral Responsible Conduct of Research Course 1.
- **Stage:** Stage 1 - Basic Course
- **Description:** This course is for investigators, staff and students with an interest or focus in Social and Behavioral research. This course contains text, embedded case studies AND quizzes.

- **Report ID:** 15337108
- **Completion Date:** 05/18/2015
- **Expiration Date:** N/A
- **Minimum Passing:** 80
- **Reported Score*:** 100

REQUIRED AND ELECTIVE MODULES ONLY	DATE COMPLETED	SCORE
Responsible Conduct of Research (RCR) Course Introduction (ID:1522)	02/21/15	No Quiz
Research Misconduct (RCR-Basic) (ID:16604)	02/21/15	5/5 (100%)
Data Management (RCR-Basic) (ID:16600)	02/21/15	5/5 (100%)
Authorship (RCR-Basic) (ID:16597)	03/20/15	5/5 (100%)
Peer Review (RCR-Basic) (ID:16603)	03/20/15	5/5 (100%)
Responsible Mentoring 01-1625 Archived 1625 (ID:1625)	05/18/15	6/6 (100%)
Conflicts of Interest (RCR-Basic) (ID:16599)	05/18/15	5/5 (100%)
Collaborative Research (RCR-Basic) (ID:16598)	05/18/15	5/5 (100%)
Responsible Conduct of Research (RCR) Course Conclusion (ID:1043)	05/18/15	No Quiz

For this Report to be valid, the learner identified above must have had a valid affiliation with the CITI Program subscribing institution identified above or have been a paid Independent Learner.

CITI Program
 Email: citisupport@miami.edu
 Phone: 305-243-7970
 Web: <https://www.citiprogram.org>

COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI PROGRAM)
COURSEWORK TRANSCRIPT REPORT**

** NOTE: Scores on this Transcript Report reflect the most current quiz completions, including quizzes on optional (supplemental) elements of the course. See list below for details. See separate Requirements Report for the reported scores at the time all requirements for the course were met.

- **Name:** Shakeika Everett (ID: 4694923)
- **Email:** skeveret@go.olemiss.edu
- **Institution Affiliation:** University of Mississippi - Oxford (ID: 542)
- **Institution Unit:** Communication Sciences and Disorders
- **Phone:** 6014102721

- **Curriculum Group:** Responsible Conduct of Research
- **Course Learner Group:** Social and Behavioral Responsible Conduct of Research Course 1.
- **Stage:** Stage 1 - Basic Course
- **Description:** This course is for investigators, staff and students with an interest or focus in Social and Behavioral research. This course contains text, embedded case studies AND quizzes.

- **Report ID:** 15337108
- **Report Date:** 05/18/2015
- **Current Score**:** 100

REQUIRED, ELECTIVE, AND SUPPLEMENTAL MODULES	MOST RECENT	SCORE
Responsible Conduct of Research (RCR) Course Introduction (ID:1522)	02/21/15	No Quiz
Authorship (RCR-Basic) (ID:16597)	03/20/15	5/5 (100%)
Collaborative Research (RCR-Basic) (ID:16598)	05/18/15	5/5 (100%)
Conflicts of Interest (RCR-Basic) (ID:16599)	05/18/15	5/5 (100%)
Data Management (RCR-Basic) (ID:16600)	02/21/15	5/5 (100%)
Responsible Mentoring 01-1625 Archived 1625 (ID:1625)	05/18/15	6/6 (100%)
Peer Review (RCR-Basic) (ID:16603)	03/20/15	5/5 (100%)
Research Misconduct (RCR-Basic) (ID:16604)	02/21/15	5/5 (100%)
Responsible Conduct of Research (RCR) Course Conclusion (ID:1043)	05/18/15	No Quiz

For this Report to be valid, the learner identified above must have had a valid affiliation with the CITI Program subscribing institution identified above or have been a paid Independent Learner.

CITI Program
 Email: citisupport@miami.edu
 Phone: 305-243-7970
 Web: <https://www.citiprogram.org>

COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI PROGRAM)
COURSEWORK REQUIREMENTS REPORT*

* NOTE: Scores on this Requirements Report reflect quiz completions at the time all requirements for the course were met. See list below for details. See separate Transcript Report for more recent quiz scores, including those on optional (supplemental) course elements.

- **Name:** Shakeika Everett (ID: 4694923)
- **Email:** skeveret@go.olemiss.edu
- **Institution Affiliation:** University of Mississippi - Oxford (ID: 542)
- **Institution Unit:** Communication Sciences and Disorders
- **Phone:** 6014102721

- **Curriculum Group:** Human Research
- **Course Learner Group:** Group 4A SBR Undergraduate Students at the University of Mississippi.
- **Stage:** Stage 1 - Basic Course
- **Description:** SBR Undergraduate Students at the University of Mississippi. Complete all required modules and associated quizzes.

- **Report ID:** 15337107
- **Completion Date:** 08/31/2015
- **Expiration Date:** 08/30/2018
- **Minimum Passing:** 80
- **Reported Score*:** 100

REQUIRED AND ELECTIVE MODULES ONLY	DATE COMPLETED	SCORE
Belmont Report and CITI Course Introduction (ID: 1127)	08/30/15	3/3 (100%)
Students in Research (ID: 1321)	08/30/15	10/10 (100%)
History and Ethical Principles - SBE (ID: 490)	08/30/15	5/5 (100%)
Defining Research with Human Subjects - SBE (ID: 491)	08/31/15	5/5 (100%)
The Federal Regulations - SBE (ID: 502)	08/31/15	5/5 (100%)
Assessing Risk - SBE (ID: 503)	08/31/15	5/5 (100%)
Informed Consent - SBE (ID: 504)	08/31/15	5/5 (100%)
Privacy and Confidentiality - SBE (ID: 505)	08/31/15	5/5 (100%)
University of Mississippi (ID: 834)	08/31/15	No Quiz

For this Report to be valid, the learner identified above must have had a valid affiliation with the CITI Program subscribing institution identified above or have been a paid Independent Learner.

CITI Program
 Email: citisupport@miami.edu
 Phone: 305-243-7970
 Web: <https://www.citiprogram.org>

COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI PROGRAM)
COURSEWORK TRANSCRIPT REPORT**

** NOTE: Scores on this Transcript Report reflect the most current quiz completions, including quizzes on optional (supplemental) elements of the course. See list below for details. See separate Requirements Report for the reported scores at the time all requirements for the course were met.

- **Name:** Shakeika Everett (ID: 4694923)
- **Email:** skeveret@go.olemiss.edu
- **Institution Affiliation:** University of Mississippi - Oxford (ID: 542)
- **Institution Unit:** Communication Sciences and Disorders
- **Phone:** 6014102721

- **Curriculum Group:** Human Research
- **Course Learner Group:** Group 4A SBR Undergraduate Students at the University of Mississippi.
- **Stage:** Stage 1 - Basic Course
- **Description:** SBR Undergraduate Students at the University of Mississippi. Complete all required modules and associated quizzes.


- **Report ID:** 15337107
- **Report Date:** 08/31/2015
- **Current Score**:** 100

REQUIRED, ELECTIVE, AND SUPPLEMENTAL MODULES	MOST RECENT	SCORE
Students in Research (ID: 1321)	08/30/15	10/10 (100%)
History and Ethical Principles - SBE (ID: 490)	08/30/15	5/5 (100%)
Defining Research with Human Subjects - SBE (ID: 491)	08/31/15	5/5 (100%)
Belmont Report and CITI Course Introduction (ID: 1127)	08/30/15	3/3 (100%)
The Federal Regulations - SBE (ID: 502)	08/31/15	5/5 (100%)
Assessing Risk - SBE (ID: 503)	08/31/15	5/5 (100%)
Informed Consent - SBE (ID: 504)	08/31/15	5/5 (100%)
Privacy and Confidentiality - SBE (ID: 505)	08/31/15	5/5 (100%)
University of Mississippi (ID: 834)	08/31/15	No Quiz

For this Report to be valid, the learner identified above must have had a valid affiliation with the CITI Program subscribing institution identified above or have been a paid Independent Learner.

CITI Program
 Email: citisupport@miami.edu
 Phone: 305-243-7970
 Web: <https://www.citiprogram.org>

Appendix B

	The University of Mississippi Institutional Review Board
Protocol #	15-060
Approval date	09-02-15
Expiration date	09-01-16
Signature	Ashley Crumby

Parental Consent Form

Consent to Participate in an Experimental Study

Title: Autism Spectrum Disorder: Is Technology Beneficial During Transition from Preschool to Elementary School?

Investigator

Shakeika Everett, Student, B.S.
Department of Communicative Sciences
and Disorders
101 Creekmore Boulevard
Apt. 3133B
Oxford, MS 38655
(601) 410-2721

Advisor

Lennette Ivy, Faculty, Ph.D.
Department of Communicative Sciences and
Disorders
302 George Hall
The University of Mississippi
(662) 915-5130

Description

This research seeks to assess various intervention methods and uses of technology that aid preschool children with autism in transitioning from a preschool environment to an elementary school environment. This research will study the daily activities and routines of a six-year-old child diagnosed with autism within a preschool setting as well as within an elementary school setting. This study will also assess how well the child transitions between both environments and what intervention methods and technological uses aid the child in transitioning.

Risks and Benefits

There are no potential risks, but benefits to participation in this research include reduced stress, frustration, and outbursts as well as encouragement of more educational engagement.

Cost and Payments

There are no costs for helping us with this study.

Confidentiality

Confidentiality will be maintained by immediately assigning your child a participant number. All subsequent data obtained will only be identifiable by your child's participant number and not by your child's name. Data will be secured in a locked filing cabinet.

Right to Withdraw

Your child does not have to take part in this study. You may withdraw your child from this study at any time. Your child may decide they no longer want to participate, and withdraw themselves at any time.

IRB Approval

This study has been reviewed by The University of Mississippi's Institutional Review Board (IRB). The IRB has determined that this study fulfills the human research subject protections obligations required by state and federal law and University policies. If you have any questions, concerns, or reports regarding your rights as a participant of research, please contact the IRB at (662) 915-7482.

Statement of Consent

I have read the above information. I have been given a copy of this form. I have had an opportunity to ask questions, and I have received answers. I consent for my child to participate in the study.

	<u>Barnett Pinson 5-8-08</u>
Signature of Parent/Guardian	Name of Child Participant Date of Birth
Date	<u>Shakeika Everett 9/2/15</u>
	Signature of Investigator Date

**NOTE TO PARTICIPANTS: DO NOT SIGN THIS FORM
IF THE IRB APPROVAL STAMP ON THE FIRST PAGE HAS EXPIRED.**

Appendix C



THE UNIVERSITY of
MISSISSIPPI
DEPARTMENT OF COMMUNICATION SCIENCES AND DISORDERS
SPEECH AND HEARING CENTER

BOARD APPROVED

JUL 27 2015

OXFORD SCHOOL DISTRICT

TO: Oxford School District Board of Trustees

FROM: Lennette J. Ivy, PhD, CCC-SLP
Department Chair and Associate Professor
Department of Communication Sciences and Disorders
The University of Mississippi
662.915.5130
livy@olemiss.edu

RE: Permission to engage in research in the Oxford School District

DATE: June 18, 2015

This is a request for permission to engage in a research project within the Oxford School District. The Department of Communication Sciences and Disorders (CSD) at the University of Mississippi operates the Hearing Impaired, Language and Literacy Preschool Laboratory Class (HILL CLASS) which, provides intensive language intervention to preschool children with language disorders and other special needs due to varying etiologies. Since opening in January 2014, the HILL CLASS has served several preschool children, who attend school in the Oxford School District, or who will attend. Autism is one of the disorders presented in the HILL CLASS that impacts language development.

While there are various intervention strategies aimed at supporting the educational development of children with autism, limited research exists on the transitioning process from preschool to more advanced elementary education settings. In an effort to support our children in transitioning from a small

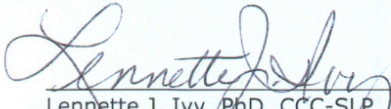
classroom environment, to an educational setting where they are mainstreamed with typically developing children, the CSD Department is expanding the HILL CLASS to include a half day Transition Class for the children who are aging out of HILL CLASS. This investigation seeks to facilitate language and literacy instructional engagement in the elementary setting; minimize the amount of outbursts that are due to the child not being able to communicate; support the child's ability to transition from one educational activity to the next, and from one educational environment to another; and increase social interactions with peers.

The Department of Communication Sciences and Disorders would like permission to collect data during the 2015-2016 school year, to determine the outcomes of the instructional strategies used within the Transition Class and, the impact on the child's performance in the elementary classroom. The participants in this project will be one child with autism, who has been identified and parent permission obtained, and the child's first grade teacher(s). Teacher(s) will only be asked to report on the child's performance on the targeted behaviors.

The HILL CLASS uses the comprehensive curriculum "Read It Once Again" Level 1, and the Transition Class will use Level 2. Both levels of the curriculum promotes and establishes an early literacy-based foundation for the development of basic skills. The Level 2 curriculum activities enhance phonemic awareness, math skills, science, creative writing, and social studies. To support the children's success at the elementary level, the Transition Class will incorporate IEP goals and grade level state standards where appropriate that have been identified by the Oxford School District's Special Education Program.

An application to engage in this research project is currently under review by the University of Mississippi's Institutional Review Board (IRB). The Institutional Review Board requires documentation of permission from your board before the application can continue through the approval process.

Thank you for your consideration of this request and if more information is needed, my contact information is above.



Lennette J. Ivy, PhD, CCC-SLP
Associate Professor and Department Chair

References

- Brown, A.B. & Elder, J.H. (2014). Communication in autism spectrum disorder: A guide for pediatric nurses. *Pediatric Nursing*, 40(5), 219-225.
- Denkyirah, A.M. & Agbeke, W.K. (2010). Strategies for transitioning preschoolers with autism spectrum disorders to kindergarten. *Early Childhood and Education Journal*, 38(4), 265-270.
- Hume, K., Sreckovic, M., Snyder, K., & Carnahan, C.R. (2014). Smooth transitions: Helping students with autism spectrum disorder navigate the school day. *Teaching Exceptional Children*, 47(1), 35-35.
- Jung, S. & Sainato, D.M. (2013). Teaching play skills to young children with autism. *Journal of Intellectual & Developmental Disability*, 38(1), 74-90.
- Mavropoulou, S., Papadopoulou, E., & Kakana, D. (2011). Effects of task organization on the independent play of students with autism spectrum disorder. *Journal of Autism & Developmental Disorders*, 41(7), 913-925.
- National Research Council (2001). Development of Communication. In *Educating Children with Autism* (pp. 47- 65). Committee on Educational Interventions for Children with Autism. Division of Behavioral and Social Sciences and Education. Washington, DC: National Academy Press.
- Prelock, P. (2015). DSM-5 changes: Understanding the social challenges in children with ASD. *Perspectives on Language Learning and Education*, 22, 5-12.
- Steinbrenner, J.D. (2015). Enhancing engagement in the classroom for students with ASD. *Perspectives on Language Learning and Education*, 22, 22-30.

Wong, C. & Kasari, C. (2012). Play and joint attention of children with autism in the preschool special education classroom. *Journal of Autism & Developmental Disorders*, 42(10), 2152-2161.